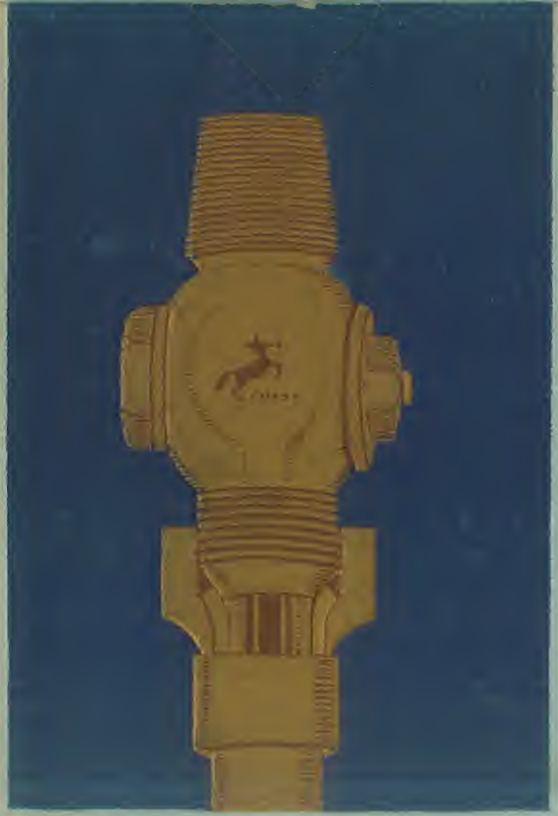


CHASE

COPPER WATER TUBING

for easy replacements

CHASE

Chase
Copper Water Tubing
and
Compression Fittings

For Easy Replacements

CHASE

Made by the makers of
ALPHA BRASS PIPE

Trade Edition

Chase Brass & Copper Co.
— INCORPORATED —
Waterbury Connecticut

CONTENTS

Copper Water Tubing—A New Chase Product for Easy and Cheap Replacement of Worn-out Water Pipes

Flexible

runs between walls and around corners similar to electric wiring, and yet hard enough not to dent or flatten easily.

Strong

will stand over 3000 lbs. water pressure. (Average city water pressure 30 to 120 lbs.)

Freeze-Proof—Heat-Proof

freezing water will expand it without cracking. Will ...v heat up to 400° Farenheit. (Water boils at

...e deoxidized Chase copper, which

...ng lengths, eliminating useless fittings, and because it saves cutting into walls and floors that are expensive to replaster, retile and repaint, the total replacement cost is cheaper than any other kind of water pipe.

Now, you can easily replace every slow-running rusty water pipe in your home with Chase Copper Water Tubing, and at a lower price than was ever possible before

Listen to the questions this man asks his plumber about it. He brings up many of the things you might want to ask.

Question..... **What is this Chase Copper Water Tubing?**

Plumber It's a copper pipe made flexible enough to bend easily, and thick and strong enough to stand twenty-five times any city water pressure!

Question..... **Just how thin is it?**

Plumber It's no thinner than an ordinary brass pipe where it has been threaded. But Chase Copper Water Tubing is used with a special Chase fitting and doesn't need threading so it doesn't need the extra thickness that threaded pipes must have.

Question..... **What kind of a fitting does it use?**

Plumber Chase has designed a special compression fitting of much the same type that has been used successfully for many years in automobile gasoline and oil lines. This is the fitting that has been successfully used with Chase Copper Water Tubing in all our tested house installations.

Question..... **Will it hold as tight as an ordinary threaded fitting?**

Plumber Yes. It would take a pull of nearly 3,000 lbs. to break the tube and fitting apart.

Question..... **Any chance to loosen the fitting by vibration, or moving in any way?**

Plumber No. This has been fully tested and in fact the results show the joint is a lot stronger than rigid pipe and threaded fittings.

Question..... **How about the copper tubing? Will it sag or bend too much?**

Plumber No. I've seen a lot of it installed and there's never been a bit of trouble that way. It can be bent but it won't bend if you see what I mean.

Question..... **Will it bulge or stretch from too hot water or air in the pipes?**

Plumber Not a chance. The only change possible is for the pipe to expand slightly, if the water inside the pipe was frozen.

Question..... **Why do you say it's specially good for replacement?**

Plumber Because you can run it down through the wall similar to an electric wire without having to cut into the plaster to make a lot of connections.

Question..... **All this sounds pretty good. What are the bad things about it? Why hasn't it been used before?**

Plumber I don't know. Perhaps because a manufacturer has never produced a complete line of guaranteed, trade-marked fittings, and tubing, and started in to tell people about it as Chase has.

Question..... **Suppose a plumber never installed any before. Could he do it easily the first time?**

Plumber Yes, it's a cinch. Really a lot easier than making threaded connections.

Question..... **Is it better than brass pipe?**

Plumber No. But it is particularly adapted for replacements where it's hard to work inside walls and not much room to make joints.

Question..... **How does it compare in cost with other pipes?**

Plumber The cost of the copper tubing and compression fittings is slightly more expensive than the cheapest *rustable* pipe and fittings. But because it's easier to replace with long lengths of copper tubing and fewer fittings, and with very little cutting into walls and floors, it is actually cheaper in the end than any other water pipe there is! And you get water pipes that will last and last and last, and always give you good clean water.

Past Experience

In Europe

Copper water tubing has been successfully used for many years in Great Britain and other foreign countries. While the plumbing skill and sanitary codes of Europe have not advanced as rapidly in the use of concealed plumbing as we have in America, still their successful use of copper water tubing and flanged fittings fully recommends its introduction to the United States.

It is difficult to say just why it hasn't been used before this in America, but at last an American manufacturer has now put a guaranteed brand of copper tubing and fittings on the market.

In America

While copper water tubing and flanged fittings have not been used for plumbing in the United States, they have been used for many years in other ways. On railway locomotives and boats its use has been a standard one, and in automobile gasoline and oil lines it has been used for many years in every make of car. Every mechanic, and most automobile owners, recognize the use of copper tubing and flanged fittings in connecting the gasoline line running from the vacuum tank to the carburetor.

Lately the use of copper tubing and flanged fittings has been extended to electrical refrigerators, heater coils, deoderizers, and other mechanical contrivances now being put on the market, and its successful use under so many different conditions over such a long period of time will recommend its more simple use in house plumbing lines.

Underground Water Lines

The experience of using copper water tubing and flanged fittings for underground water service is probably closer to its new use for house water pipes than any other.

Nowadays copper water tubing is used throughout the country to connect the house with the city water main in the street.

Letters of endorsement from prominent water works engineers and records of long service have proved conclusively that copper water tubing for underground work is far superior to any other pipe or tube previously used.

The strains and stresses, the corrosive action of the soil, and other hard tests that copper water tubing goes through underground, show that the material is ideally adapted for its use in the home. No water pipe inside of the house would be called upon to stand the hard service of tubing in underground work. And as this material has stood up for so many years, and has given such satisfactory service under such severe conditions, every householder can feel confident in specifying the material for his own home.

A Complete Chase Product

Chase Copper Water Tubing is made by the makers of the well known and nationally advertised "Alpha Brass Pipe." Chase is the only manufacturer selling a complete line of copper water tubing and compression fittings under the same name, trade-mark and guarantee. Chase Copper Water Tubing and Compression Fittings are made for both house installation and underground water service lines.

a. Tube and Fittings Under Same Trade-mark

We call attention to the advantage of being able to use Chase Compression Fittings which have been specially designed for use with Chase Copper Water Tubing. In this way the success of the installation is directly upon one manufacturer who is responsible for both the tubing and fittings. Plumbers, jobbers, architects and builders will recognize this undivided responsibility as an advantage.

b. Chase-mark

The reputation and size of the company are an excellent guarantee for their products, which are known and sold under the characteristic and distinctive Chase mark shown above.

c. Guarantee

The Chase mark is stamped every 12″ along each length of Chase Copper Water Tubing. Every inch of Chase Copper Water Tubing is guaranteed. In fact, every test of Chase tubing will show that it far exceeds the regular requirements for pureness of copper, pressure tests, flattening and other tests.

It is the intention of the company to make Chase Copper Water Tubing better than necessary so that our customers will have every reason to prefer it.

In the same way each Chase compression fitting is guaranteed to be perfectly satisfactory for its use. If there is the slightest dissatisfaction with any of our products, we would consider it a favor if our customers would let us know about it as soon as possible so we will have an opportunity to arrange matters to their satisfaction.

d. Makers

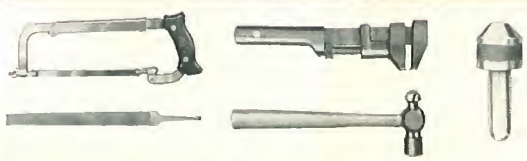
Chase Companies, Inc., have two large brass mills in Waterbury, Connecticut, and a new plant, to cost approximately six million dollars, is being built in Cleveland, Ohio. One of its Waterbury plants contains what is said to be the largest brass and copper tube mill in the world. These mills, together with several brass manufacturing plants make the Chase Companies one of the largest manufacturers of brass and copper products in the world.

e. 92 Years Experience

The company dates back to 1837, and its experience in brass making and manufacturing goes back through three generations.

f. Tube Products

Chase tubing is made for many uses such as: brass water pipes, condenser tubing, gas and refrigerator tubing, gas heater tubing, fancy shaped tubing of all kinds and various other special tubes of brass and copper.



The plumber's traveling equipment is light. A hammer, hacksaw, reamer or file, wrench and flanging tools are all he needs.

The coil of copper water tubing is unrolled and easily sawed to the proper length needed with an ordinary hacksaw.

The inside edge of the tube is reamed smooth with a file or reamer so that it will fit tightly on the fitting.

The outside edge as well as the inside edge, is rough from sawing and is smoothed off with a file or reamer.

The sleeve-nut of the fitting is slipped over the end of the tube to be drawn back after the flanging operation.

The shank of the flanging tool corresponding to the size of tube, is moistened with oil and inserted in the tube.

The flanging tool is hammered home, flanging the edge of the tube until it fills the undercut of the flanging tool.

After the tube is flanged the sleeve-nut is drawn out to the end of the flanged tube ready to thread onto the fitting.

A drop of oil is added to the inside of the flange. The fitting is then inserted into the sleeve-nut and screwed home.

The next tube is connected to the fitting in the same way. The sleeve-nuts are screwed up tight making a strong connection.

1. A New England Home being completely remodeled. Chase Copper Water Tube is being installed throughout the house and for the underground water service line from the artesian well.

2. Flanging a length of tube running from the well to the house. Long lengths can be assembled above ground and dropped into the trench.

3. Attaching a fitting to the flanged tube. The next tube is flanged in the same way and connected to the other end of the fitting.

4. The line of copper water service tube is completed and run through the foundation of the house into the cellar.

5. Inside the cellar the copper water tube is continued by inserting a 90° elbow furnished for sharp bends of this kind.

6. A short piece of tube is assembled to the elbow. The flanging tool is inserted into the tube for flanging the ends.

7. A few blows from a hammer flanges the end of the tube. It is done in a fraction of the time it would take to cut threads.

8. The sleeve-nut is drawn down until stopped by the flange on the tube and is then screwed tightly to the elbow.

9. A tee for a horizontal take-off is connected to the other end of the short flanged tube in the same way as in the preceding operation.

10. The compression stop and waste for the main house is completed and is conveniently located about waist high.

11. The piece of tube needed between the compression stop and waste and water boiler is measured for length and location of bends.

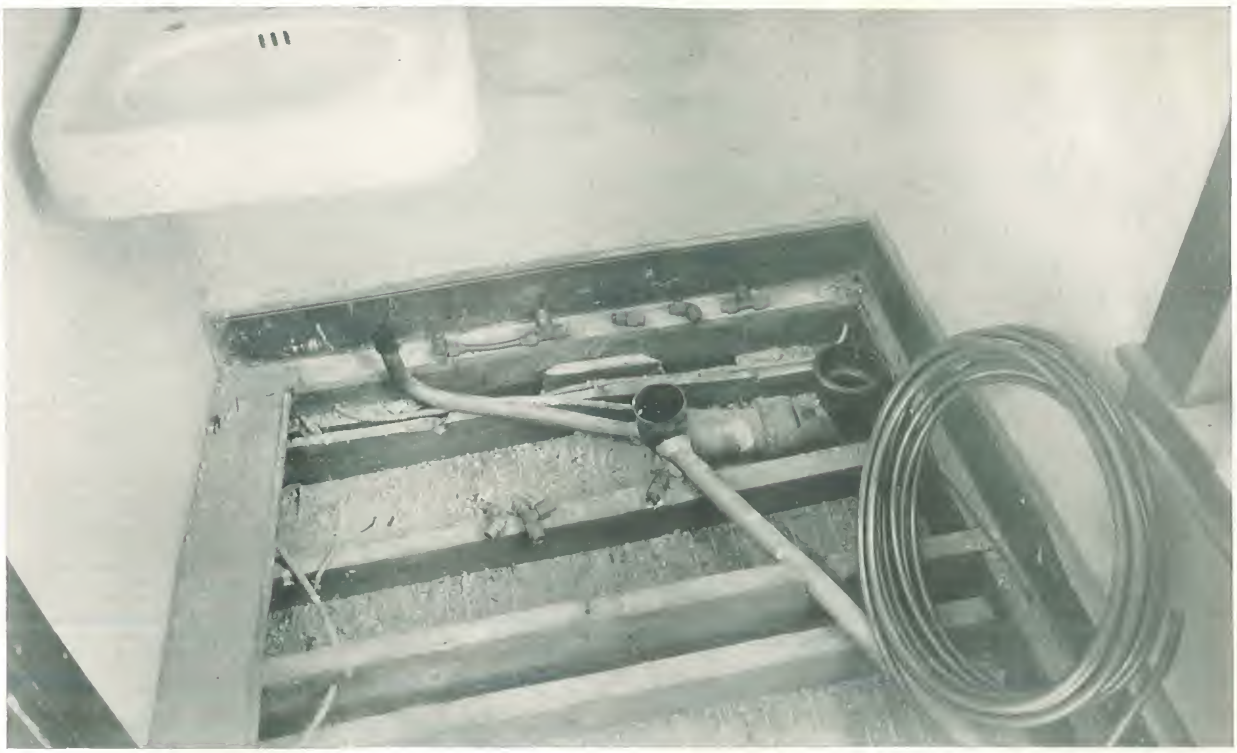
12. Cutting to exact length and marking the bends in the tube to be run from the compression stop and waste to the water boiler. The photograph below illustrates how easily the bending is accomplished.

13. Starting a 90° bend by working up the end of the tube and using the knee as a guide for rounding the bend. The best bending results will be obtained by bending the tube gradually and not abruptly.

18. Chase Copper Water Tube is ductile enough to be worked through floors and walls and around obstructions from the attic to the cellar in one continuous piece, just as an electrician puts in electric cable.

19. The tube is drawn from the bathroom to the room below, and into the cellar. This can be done inside the wall on many installations.

20. The tubing worked down from two flights above is received in the cellar and bent in the direction the water lines are to run.



21. The bathroom before Chase Copper Water Tube is installed for the wash basin, closet and bathtub. This picture shows the actual start of the installation and below is the finished work.

22. The bathroom water lines completed and showing the perfect bends that can be made in the tube; eliminating the additional cost of fittings that would be needed for a similar installation of rigid pipe.

The Advantages of Chase Copper Water Tubing

1. Easy Installations

Chase Copper Water Tubing is soft enough to be easily bent and worked around obstructions. It can be run between studding, over and under electrical conduits, without using fittings, but by manipulating and bending the tubing much as an electrician installs an electric cable. The removal of a base board or a floor board is usually all that is necessary to make the replacement. It is not necessary to break holes into expensively plastered walls or ceilings.

Chase Copper Water Tubing in coils can be installed in uninterrupted runs without the use of fittings. In many instances the run can be continuous from the take-off to the floor fitting or fixture.

For concealed work, coils are absolutely necessary. For broken up runs in the cellar, straight lengths can be used, but pieces cut from coils are just as satisfactory.

2. Corrosion

Chase Copper Water Tubing made from deoxidized copper will give the maximum service in waters which are corrosive. It won't rust and will always give a full flow of good clear water.

3. Cheaper Labor Costs

The speed in which the tubing can be worked around obstructions, the elimination of unnecessary fittings, and the easier and quicker flanging operation instead of threading, should average a saving of 60% less time than a rigid pipe installation. In rigid pipe many mistakes are made in cutting to exact lengths resulting in a loss of time and labor.

4. Cheaper Fittings

Longer runs of copper water tubing require fewer fittings than rigid pipe installations and it is estimated that the total cost of Chase Compression Fittings used in connection with Chase Copper Water Tubing is approximately 25% cheaper than fittings for rigid pipe.

5. Freezing and Expansion

Chase Copper Water Tubing will expand and contract with heat and cold. The pipe can be frozen again and again without danger of bursting, a feature unique to copper water tubing.

Its ability to stretch or expand provides for the settlement of houses.

6. High Factor of Safety

The factor of safety of at least 30 under any condition, as shown by actual tests, is further proof of the ability of Chase Copper Water Tubing to meet difficult as well as ordinary conditions of water pressure, abuse and service.

Statements About Chase Copper Tubing Are Based On Facts

Home owners, architects, plumbers, builders and others who are interested in the qualities of Chase Copper Water Tubing will be interested in the actual tests, made both in our own laboratory and elsewhere, which check the statements and claims made concerning it.

1. *Freezing*

"Chase copper water tubing can be frozen many times without cracking."

TEST

Pieces of ¾" Chase Copper Water Tubing were connected to Chase compression fittings, filled with water and subjected to a temperature sufficient to freeze the water in them solid.

After freezing in this way 7 times, the result was a total increase in the outside diameter of .218 inches.

The tube had been frozen 7 times and had stretched or bulged until its diameter was 24.7 percent larger, but it still had not cracked.

This checks the statement that Chase Copper Water Tubing can be frozen many times without cracking.

2. *Stretching*

"Chase copper water tubing joined by Chase fittings will withstand any pull, pressure, or strain of city water service."

TEST

In an effort to pull, or remove the tubing from the compression fitting, it was found that the average pull necessary to start removal of ¾" tubing from the fitting was approximately 2,900 lbs.

This is amply sufficient to assure retention of the assembly at the junction of the fitting under the most severe service conditions.

3. *Bursting Pressure*

"Chase copper water tubing withstands twenty-five times the normal city water pressure without bursting."

TEST

Tests were made on Chase Copper Water Tubing to determine the bursting pressure and strength of the tubing. In these tests it was found that the average bursting pressure of ¾" Chase Copper Water Tubing varied from 5,000 to 5,200 lbs. per square inch.

When tested in conjunction with Chase compression fittings it was proved that although the tubing burst at these tremendous pressures, there never was a single failure at the joint.

4. *Bending*

"Chase copper water tubing can be bent to any radius necessary for installation."

TEST

¾" Chase Copper Water Tubing was bent into 90 degree elbows on a 4" radius without kinking or constriction of the tubing. Bending to a radius smaller than this will never be necessary when using or installing the tubing. Kinking did not occur until bends were attempted on a radius smaller than 4".

5. *Factor of Safety*

"Chase copper water tubing has a minimum factor of safety of 30 to 50 at city water pressures."

TEST

The bursting tests show that Chase Copper Water Tubing has a factor of safety of 50 against this form of failure at 100 lbs. per square inch water pressure.

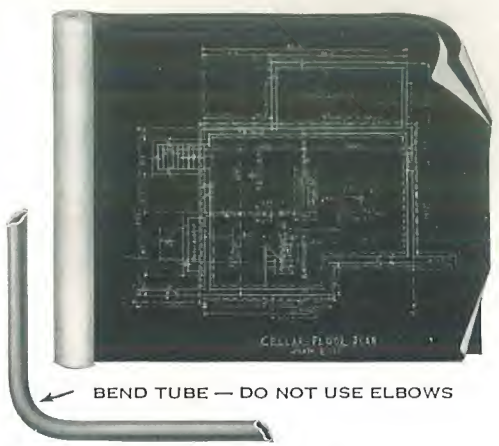
All of the tests show that even under the most unfavorable conditions which could be encountered there is still a higher factor of safety left to insure against failure, than is ordinarily required.

Suggestions for Installing

The general methods for installing Copper Water Tubing require no change in plumbing practices. There are, however, a few new applications in the use of Copper Water Tubing which result in a great saving of time, labor and expense in replacing rust clogged and leaky pipes.

1. Estimating

In estimating or laying out a copper water tubing installation the blueprints should be carefully gone over and bends in the tubing substituted where elbows would be used for rigid pipe.



Bends vs. Elbows

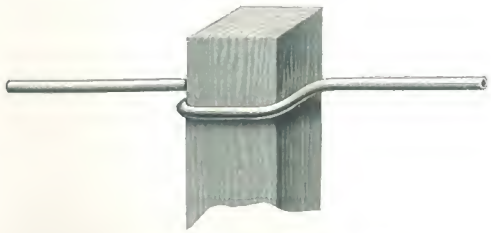
Go over your drawings or lay-out carefully and substitute bends in the tubing in place of elbows.

2. Cutting

Chase Copper Water Tubing cuts easily and quickly but care should be taken to keep the cut straight and true. The straight cut will flange perfectly but a crooked cut may mean a poor flange and an unsatisfactory connection.

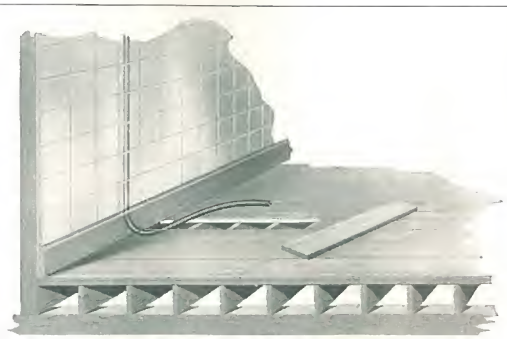
3. Bending

The best bending results will be obtained by using the hands to form a curvature in the tubing by bending the tube gradually and not abruptly. The tube is soft enough to bend readily and undue force should not be exerted at any one given point.



Around Obstructions

Reverse bends, cross-overs, etc., can be readily bent in the line without recourse to 45° or 90° elbows. The tubing is ductile enough to be bent around obstructions, consequently many nipples and elbows are saved as well as the fitting labor.

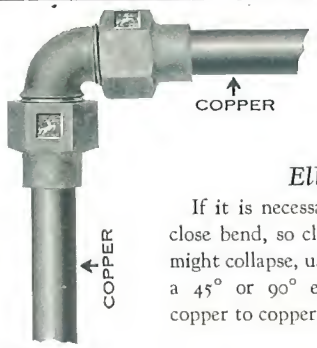


Inside Walls and Under Floors

In replacement work do as the electricians do in running BX Cable through partitions and under floors. It is much less expensive to remove a floor board or a base board and pull the tube through like electric cable than to tear out plaster uselessly to do this work.

Where the bends are too abrupt to make a proper bend without collapsing the tubing, elbows for joining copper to copper are provided. We recommend the

use of copper to copper elbows only when necessary to make a sharp bend. There

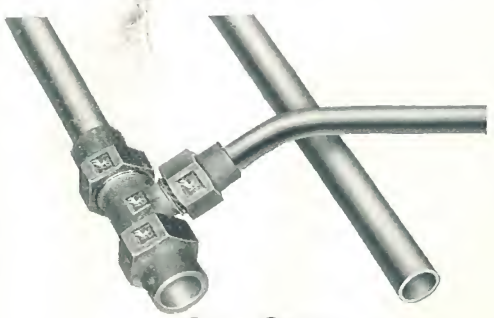


Elbows

If it is necessary to make a very close bend, so close that the tubing might collapse, use in this emergency a 45° or 90° elbow, which joins copper to copper.

will be little use for elbows except in closely confined spaces or for abrupt return bends or for joining to the top of a boiler, etc., and we wish to emphasize this condition to guard against the over-ordering of elbows.

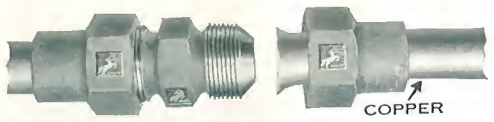
Chase Copper Water Tubing can be easily bent to make cross-overs. The



Cross-Overs

Cross-overs should be made by bending the line itself. Elbows are unnecessary.

joining of short lengths or the combining of copper tubing runs is accomplished with our regular two or three part union. Regular reducing tees and elbows, as well as



Unions

Unions for joining Copper Water Tubing are also provided in all sizes.

other fittings, are provided. In addition, reducing adapters make it possible to reduce any outlet or take off from large sizes to smaller sizes.

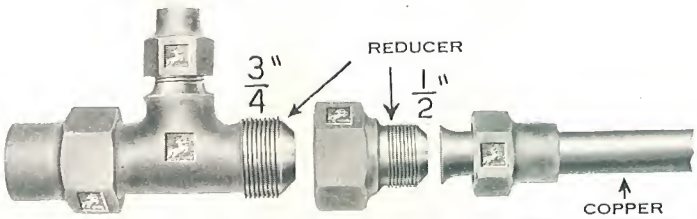
Reducing Outlets

Bushings for reducing I. P. S. outlets on all Copper Water Tubing are provided in all sizes.

4. Flanging

Thoroughly coat the flanging tool with oil before attempting to flange the tube and a drop of oil should be added to the tool before each flange is made. When the fittings are assembled a drop of oil should be placed on the flange of the tube. This materially aids in making a tight joint. The use of dope or compound of any nature on compression fittings is unnecessary and may be the cause of getting foreign matter between the seat and the tube causing a leak.

The lightest hammer possible should be used for flanging. Due to its soft temper, Chase Copper Water Tubing will flange easily under the blow of an ordinary one pound ball pein hammer.

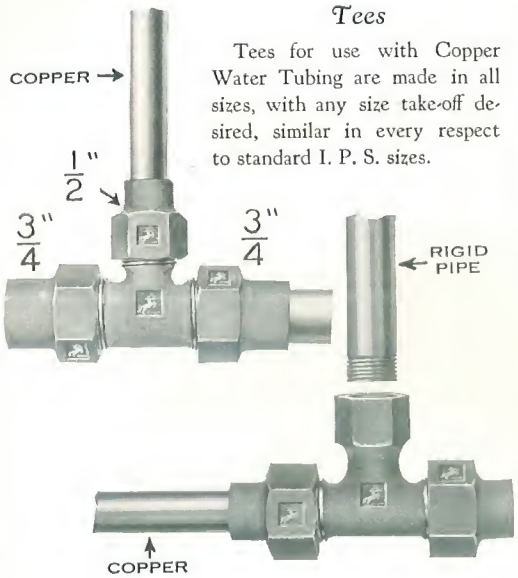


Reducing the Line

Reducing adapters are made for all Copper Water Tube Fittings reducing any fitting from any large size to any of the standard smaller sizes.

5. Tees

Tees are provided in all sizes with any size take-off, similar in every respect to iron pipe sizes. Tees are also threaded on the take-off for joining to iron pipe.



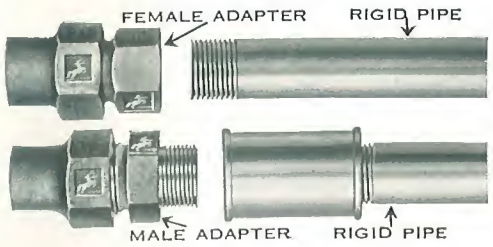
Tees

Tees for use with Copper Water Tubing are made in all sizes, with any size take-off desired, similar in every respect to standard I. P. S. sizes.

Example: To take off from a ¾" iron pipe and continue the run with copper tubing and at the same time make a take-off of a ½" riser, use a tee ¾" I. P. S. to ¾" copper to ½" copper.

6. Copper tube to rigid pipe

The use of iron pipe size valves, etc., in conjunction with copper water tubing is accomplished by using male and female adapters, which adapt threaded iron pipe fittings to copper tubing. These fittings are threaded at one end with the standard iron pipe threads but incorporate on the other end a sleeve-nut and the compression fitting for connecting copper tubing.



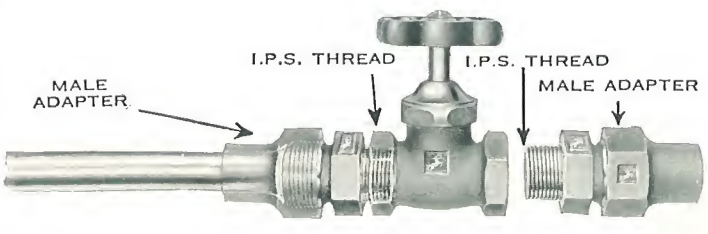
Copper to Rigid Pipe

It may be necessary in places to join Copper Water Tubing to rigid pipe which is already installed. Male or female adapters are again employed as illustrated.

The female adapter is threaded I. D. to accept male threaded iron pipe size fittings. The male adapter is threaded O. D. to accept iron pipe size fittings threaded female.

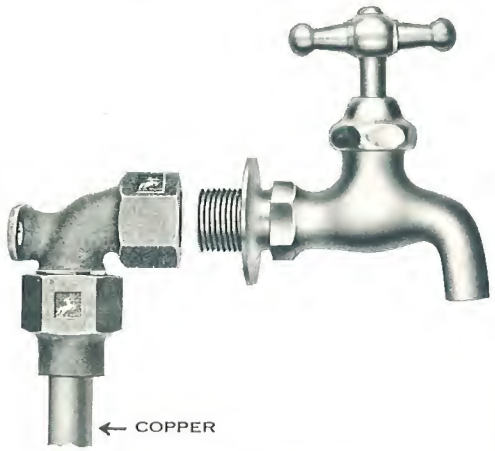
As an illustration, to use a ¾" standard compression stop and waste threaded female iron pipe size, use at the intake and outlet of the compression stop and waste a ¾" male adapter, which adapts the fitting for copper tubing.

To run copper water tubing from present rigid pipe installations the line is cut and a male or female adapter is attached to the rigid pipe, making a copper connection to which copper water tubing can be added.



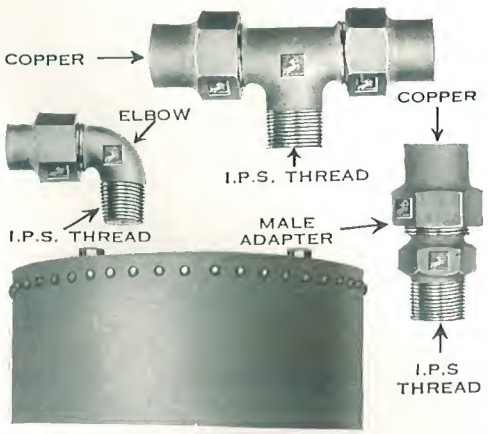
Copper to I. P. S. Fittings

To adapt rigid pipe fittings, such as compression stops, etc., for use with copper water tubing, male or female adapters are provided as illustrated.



Connecting Faucets

To connect bibbs or faucets, bracketed elbows connecting copper tubing to I. P. S. threaded fixture fittings, are supplied.

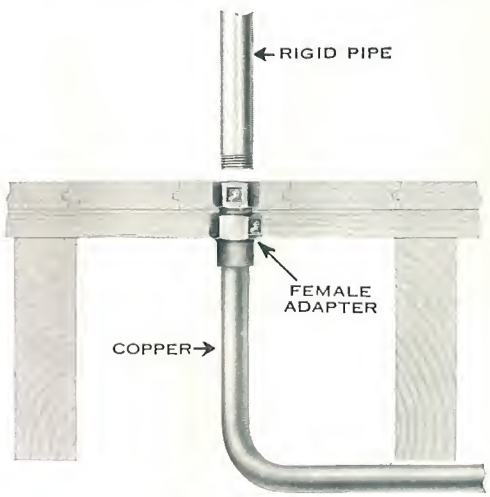


Boiler Fittings

Here again male and female adapters, elbows or tees may be used for adapting rigid pipe to copper tubing.

7. Floor Fittings

Are provided for by use of the male or female adapter. Ells are furnished with a bracket or drop ear and threaded iron pipe at the outlet end to accept fixture fittings threaded I. P. S.

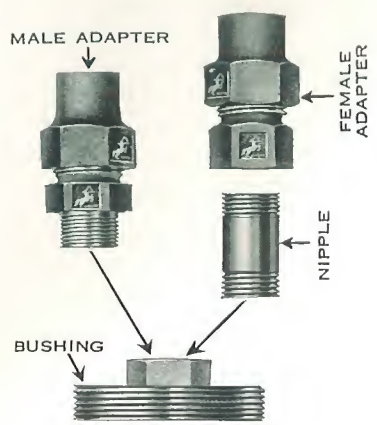


Floor Fittings

Male and female adapters are used to connect the copper tube with fixture supply pipes.

8. Boiler Fittings

For boiler fittings or for joining copper tubing to bushings threaded iron pipe size, or for attaching copper tubing to any rigid pipe, the male and female adapters are always used to make a transformation from iron pipe size to copper and from copper to iron pipe size, depending on whether the rigid pipe is threaded male or has a female fitting attached.



Bushings

Fitting to a bushing may be easily accomplished with a male or female adapter. The changes from copper to rigid pipe or vice versa can always be readily made by the use of either of these two fittings.

9. Testing the Installation

In testing a finished installation of rigid pipe a leaker or poor joint oftentimes meant disrupting the line and inserting a union before overcoming the difficulty. To perfect an installation that developed leakers, it has been necessary to do a tremendous amount of work without remuneration. Chase Copper Water Tubing solves this problem completely. If a leaker is encountered in the initial test the line is uncoupled and the tube reflanged, which generally serves to eliminate the trouble.

Each fitting being a union the line can be taken apart at every fitting and as this is the only possible place for a leaker to occur there is a union on both sides of the fitting to work upon to eliminate the trouble without altering the installation in any way.

Copper Pipe Straps

To fasten Copper Water Tubing to the ceiling or studding, use Chase Copper Straps.

Chase Copper Tube Flanging Tool

No. 1014

Sizes: 3/8", 1/2", 5/8", 3/4", 1", 1 1/4", 1 1/2", 2"

Chase Flanging Tools which provide a quick and easy method of flanging the copper water tubing to the correct angle and diameter and for a tight joint.

Importance of Packaged Fittings

All Chase compression fittings are packaged in individual boxes to protect them from injury. It is important to remember that on this new type of fitting the thread is on the outside of the fitting rather than on the inside as is the case with the ordinary brass, wrought iron and steel fittings.

If the nut of the new compression type of fitting is removed, the threads of the fitting can easily be damaged by being knocked around in a stock bin, or by dropping on the cement floor, spoiling the accurately machined threads or seat which are necessary to make tight connections that will not leak.

There are other types of fittings made today probably as carefully as ours, but between the time they leave the manufacturer and the time that they are installed on the job many things can happen to injure them and cause trouble with the installation.

Notice these advantages of using the new Chase packaged fittings:

1. No damaged threads or injured compression seats.

2. The fitting remains clean, free from grit, dirt and other foreign matter that might cause a leaky installation.

3. Each fitting being boxed, shows that it has not been abused or used before.

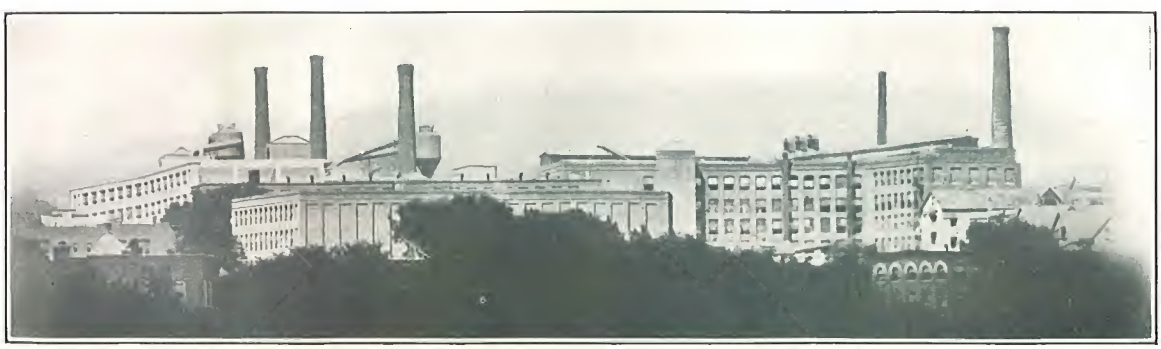
4. Each fitting is reinspected as it is being boxed.

5. Boxed fittings are quickly recognized on your shelf by their catalogue number and label. All information is clearly given on the labels which is a great help to both the jobber and the plumber.

6. The fittings identified by their boxes are easier to exchange, credit or replace.

7. Chase packaged fittings are sold in units. They are quickly checked, billed, and easily stocked and handled.

We believe that the above points will prove very important to our distributors in handling our fittings, and that our plumbing friends will quickly see the advantage of using boxed fittings. We have gone to some length in explaining this because we are the only manufacturer that is doing it at the present time, and we feel it is a very important advantage that you get by using our material.



This Chase Plant Has Manufactured Brass Articles Since 1837

Chase Compression Fittings

Alloy

Chase Compression Fittings are made from a special brass alloy with a high copper content that has been proved most satisfactory. This mixture is greatly superior to ordinary brass fittings.

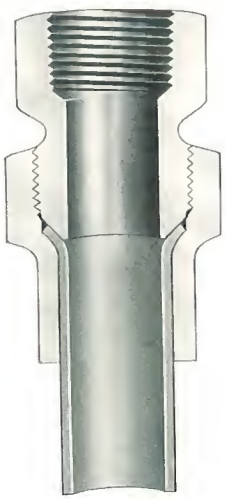
The high copper content makes Chase Compression Fittings as highly resistant to corrosion as Chase Copper Water Tubing.

Design

Chase Compression Fittings are designed for strength and service. Special thought has been given to the seating for the flanged copper tubing, it will hold the tubing firmly and without leakage under even abnormal conditions.

Guarantee

Each Chase Compression Fitting is guaranteed to be perfectly satisfactory for its use.



Sectional View of Fitting

Sectional view of Chase fitting showing how a copper tube connection is made. When the fitting nut is tightened, the tube becomes slightly compressed at the point of contact, thus forming a wedge on the end of the tube. This with the straight tube nut thread holds it firmly in position.

Packing

Chase Compression Fittings are packed in a box to protect them and each box is attractively labeled for easy identification and stocking.

Stocks

Chase Compression Fittings are generally carried in stock by plumbing supply jobbers, or they can be obtained by your jobber from any of our fourteen warehouses or from the Chase mills in Waterbury, Conn.

Warehouses

Chase Brass & Copper Co. operates 14 warehouses strategically located throughout the country in the cities listed below. Each warehouse carries a stock of Compression Fittings and Chase Copper Water Tubing for immediate delivery to plumbing supply jobbers—

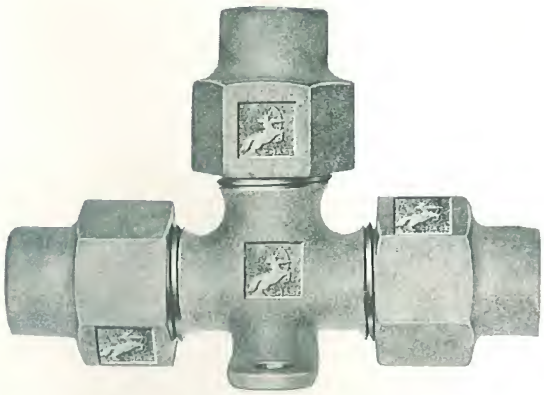
New York	Detroit
Boston	Chicago
Newark	Minneapolis
Philadelphia	St. Louis
Baltimore	New Orleans
Cincinnati	Los Angeles
Cleveland	San Francisco

SALES OFFICES: Rochester, Pittsburgh and Dallas

MILLS: Waterbury, Connecticut and Cleveland, Ohio

Chase Compression Tees

TEE # 211
(Copper to Copper to Copper)



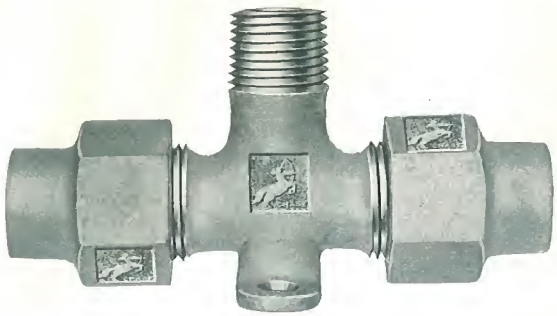
TEE # 211D with Drop Ear
(Copper to Copper to Copper)

TEE # 212
(Copper to Copper to Female I. P. S.)

TEE # 213
(Copper to Copper to Male I. P. S.)

TEE # 214
(Copper to Female I. P. S. to Copper)

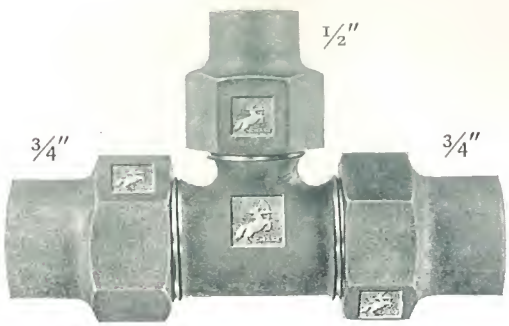
TEE # 215
(Male I. P. S. to Copper to Copper)



TEE # 213D with Drop Ear
(Copper to Copper to Male I. P. S.)

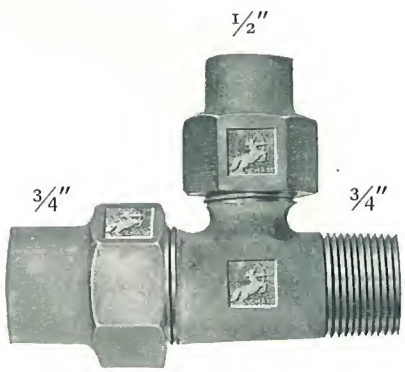
TEE # 212D with Drop Ear
(Copper to Copper to Female I. P. S.)

Chase Compression Reducing Tees

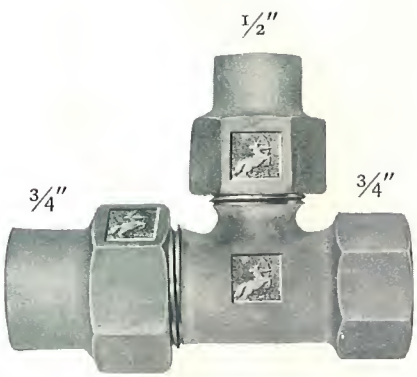


REDUCING TEE # 211R
(Copper to Copper to Copper)

REDUCING TEE # 211R
(Copper to Copper to Copper)



REDUCING TEE # 215R
(Copper to Male I. P. S. to Copper)



REDUCING TEE # 214R
(Copper to Female I. P. S. to Copper)

Chase 45° and 90° Compression Elbows

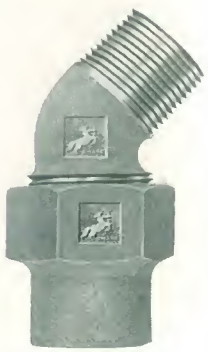
90° ELBOW # 208
(Copper to Female I. P. S.)

90° ELBOW # 208D
with Drop Ear
(Copper to Female I. P. S.)

45° ELBOW # 208A
(Copper to Female I. P. S.)

90° ELBOW # 209
(Copper to Male I. P. S.)

90° ELBOW # 209D
with Drop Ear
(Copper to Male I. P. S.)



45° ELBOW # 209A
(Copper to Male I. P. S.)

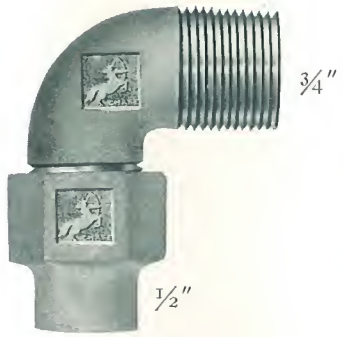
90° ELBOW # 207
(Copper to Copper)

90° ELBOW # 207D
with Drop Ear
(Copper to Copper)

45° ELBOW # 207A
(Copper to Copper)

Chase Compression Reducing Elbows

208R
REDUCING ELBOW
(Female I. P. S. to Copper)



209R
REDUCING ELBOW
(Male I. P. S. to Copper)

207R
REDUCING ELBOW
(Copper to Copper)

208AR
45° REDUCING ELBOW
(Female I. P. S. to Copper)

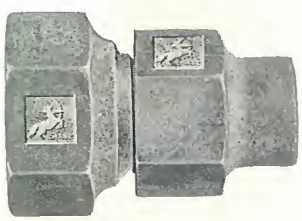
209AR
45° REDUCING ELBOW
(Male I. P. S. to Copper)

207AR
45° REDUCING ELBOW
(Copper to Copper)

Chase Compression Adapters

ADAPTER # 203
(Copper to Female I. P. S.)

ADAPTER # 204
(Copper to Male I. P. S.)



FITTING REDUCER # 223
(Copper Fitting to Copper Tubing)

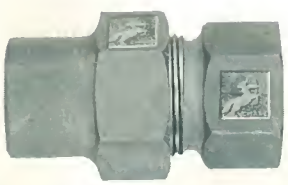
Chase Compression Unions

UNION (3 part) # 201
(Copper to Copper)

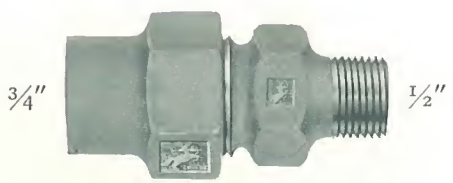
GLAND
(furnished with each 2 Part Union)

UNION (2 part) # 202
with Gland
(Copper to Copper)

Chase Compression Reducing Adapters



203R
REDUCING ADAPTER
(Copper to Female I. P. S.)



204R
REDUCING ADAPTER
(Copper to Male I. P. S.)

Chase Misc. Compression Fittings

Plug # 216A
(for Tube End)

Cap # 216
(for Compression Fittings)

Bushing # 217
(I. P. S. Reducing)

200
Sleeve-Nut

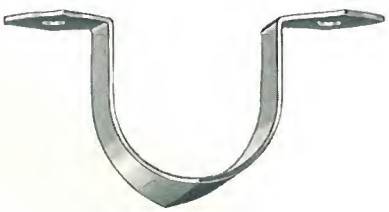
Miscellaneous

(continued)

#1014 CHASE FLANGING TOOL

Sizes: ⅜", ½", ⅝", ¾", 1", 1¼", 1½", 2"

Chase Flanging Tools are made of machined steel, case hardened. They are designed to accurately flange the tubing to the right angle and diameter.



#1019 CHASE COPPER PIPE STRAPS

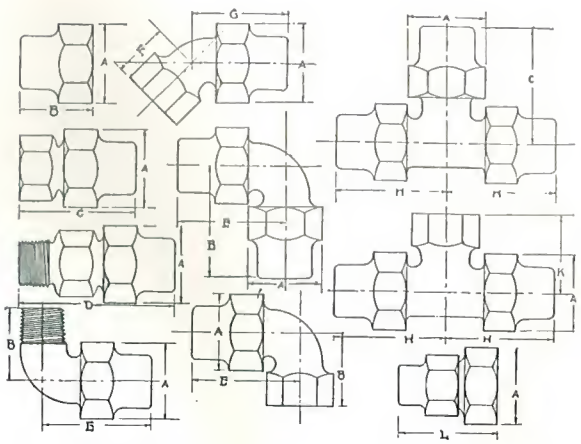
Sizes: ⅜", ½", ⅝", ¾", 1", 1¼", 1½", 2"

Chase copper pipe straps are made of a hardened copper alloy. They are shaped to accurately fit the diameter of the tubing and designed for strength and attractiveness.

Dimensions of Chase Fittings

The outline drawing of fittings below and the table directly beneath the drawing give the detailed dimensions of Chase Compression Fittings.

This table was prepared for use whenever it is necessary to figure exact space requirements in a plumbing installation.



Size In.	⅜	½	⅝	¾	1	1¼	1½	2
A	1 3/16	1 1/2	1 9/16	1 11/16	2 5/32	2 1/2	2 7/8	3 3/8
B	1 1/8	1 9/16	1 1/2	1 5/8	2 1/4	2 5/8	2 5/8	3 3/8
C	1 7/8	2 1/4	2 1/2	2 5/8	3 3/8	4	4 1/8	5
D	2 3/16	2 3/4	3 3/8	3 1/2	3 5/16	5	5	5 7/8
E	1 3/4	2 1/8	2 3/8	2 1/2	3 1/4	3 3/4	4	4 1/16
F	1 1/8	1 3/16	1 1/2	1 1/4	1 1/2	1 11/16	1 3/4	2
G	1 5/8	1 3/4	2	2 3/16	2 1/8	3 7/16	3 1/2	4 1/16
H	1 3/4	1 5/32	2 3/8	2 1/2	3 1/2	4 1/16	4 1/16	5
K	1 3/8	1 7/8	1 13/16	1 13/16	2 3/8	2 5/8	4 1/4	3 1/16
L		2	2 1/8	2 1/4	3 1/8	3 5/8	4 1/4	5

Chase Compression Stop and Wastes

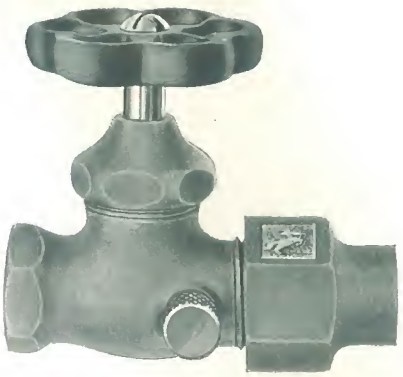
#1016 STOP AND WASTE

*Furnished in sizes corresponding to Standard iron pipe—½", ⅝" *, ¾" and 1"*

Chase Stop and Wastes are made with cap on waste which permits use as stop only. Dome Bonnett type, with stuffing box. Both inlet and outlet ends have copper water tube connection.

#1015 STOP AND WASTE

Same as above but, furnished without stuffing box.



#1017 STOP AND WASTE

*Furnished in sizes corresponding to Standard iron pipe—½", ⅝" *, ¾" and 1"*

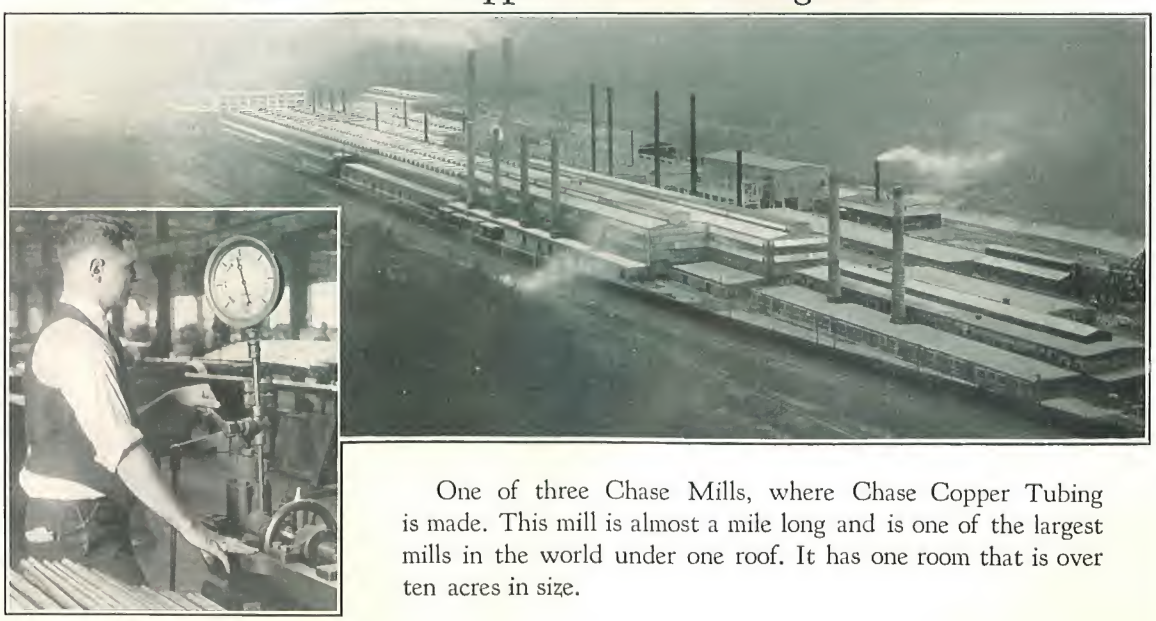
Chase Stop and Wastes are made with cap on waste which permits use as stop only. Dome Bonnett type. Inlet end female I.P.S., outlet end copper water tube connection. Can be furnished in the reverse on special order.

#1018 STOP AND WASTE

Same as above but, furnished with stuffing box.

***Furnished ¾, I.P.S. to ⅝ Copper.**

Where Chase Copper Water Tubing Is Made

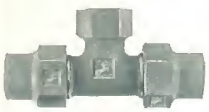
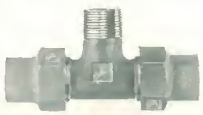


Testing tubing by 2000 lbs. water pressure

One of three Chase Mills, where Chase Copper Tubing is made. This mill is almost a mile long and is one of the largest mills in the world under one roof. It has one room that is over ten acres in size.

Chase Compression Fittings

List Prices

Fitting	Description	Catalog No.	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"
	*(Copper to Copper to Copper)*									
	Tee	211	$1.30	$1.90	$2.20	$2.50	$4.40	$7.80	$10.10	$16.05
	Reducing Tee	211R	1.45	2.25	2.50	2.85	4.85	8.55	11.40	17.95
	Drop Ear Tee	211D	1.45	2.25	2.50	2.85	4.85	8.55	11.40	17.95
	*(Copper to Copper to I. P. S. Female)*									
	Tee	212	1.10	1.60	1.85	2.05	3.65	6.50	8.20	13.25
	Reducing Tee	212R	1.25	1.95	2.15	2.40	4.10	7.25	9.50	15.15
	Drop Ear Tee	212D	1.25	1.95	2.15	2.40	4.10	7.25	9.50	15.15
	*(Copper to Copper to I. P. S. Male)*									
	Tee	213	1.10	1.60	1.85	2.05	3.65	6.50	8.20	13.25
	Reducing Tee	213R	1.25	1.95	2.15	2.40	4.10	7.25	9.50	15.15
	Drop Ear Tee	213D	1.25	1.95	2.15	2.40	4.10	7.25	9.50	15.15
	*(Copper to Copper)*									
	90° Elbow	207	.95	1.25	1.45	1.60	3.05	4.90	7.00	10.80
	Reducing Elbow	207R	1.05	1.50	1.75	1.95	3.50	5.65	8.30	12.70
	Drop Ear Elbow	207D	1.05	1.50	1.75	1.95	3.50	5.65	8.30	12.70
	*(Copper to Female I. P. S.)*									
	90° Elbow	208	.70	.95	1.10	1.20	2.30	3.60	5.10	8.00
	Reducing Elbow	208R	.80	1.20	1.40	1.55	2.75	4.35	6.40	9.90
	Drop Ear Elbow	208D	.80	1.20	1.40	1.55	2.75	4.35	6.40	9.90
	*(Copper to Male I. P. S.)*									
	90° Elbow	209	.70	.95	1.10	1.20	2.30	3.60	5.10	8.00
	Reducing Elbow	209R	.80	1.20	1.40	1.55	2.75	4.35	6.40	9.90
	Drop Ear Elbow	209D	.80	1.20	1.40	1.55	2.75	4.35	6.40	9.90
	*(Copper to Copper)*									
	45° Elbow	207A	.95	1.25	1.45	1.60	3.05	4.90	7.00	10.80

Reducing Fittings

In ordering, be sure to specify run on which reduction(s) is to be made.

All reducing fittings take list price of largest run.

I. P. S. Fittings

Specify when I. P. S. threaded fittings are ordered; run as well as thread size required.

Drop Ear Fittings

All Drop Ear Fittings are priced same as reducing fittings.

Sleeve-Nuts

All Fittings are priced complete with sleeve-nuts. Extra sleeve-nuts can be supplied to order.

Chase Compression Fittings

List Prices

Fitting	Description	Catalog No.	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"
	(*Copper to Female I. P. S.*) 45° Elbow	208A	.70	.95	1.10	1.20	2.30	3.60	5.10	8.00
	(*Copper to Male I. P. S.*) 45° Elbow	209A	.70	.95	1.10	1.20	2.30	3.60	5.10	8.00
	(*Copper to Male I. P. S.*) Adapter—Male	204	.60	.80	1.00	1.10	1.90	3.20	4.35	6.80
	(*Copper to Female I. P. S.*) Adapter—Female	203	.60	.80	1.00	1.10	1.90	3.20	4.35	6.80
	(*Copper to Copper*) Union (3 Part)	201	.85	1.15	1.40	1.55	2.75	4.90	6.55	10.20
	(*Copper to Copper*) Union (2 Part)	202	.60	.80	1.00	1.10	1.90	3.20	4.35	6.80
	(*Male I. P. S. to Female I. P. S.*) Bushings	217	.12	.15		.22	.35	.50	.70	1.00
	(*Reducer Fitting to Copper*) Reducer for Reducing Branch of Fitting	223		.60	.70	.80	1.20	2.05	3.20	4.70
	(*For use on line of tubing*) Plug for Line	216A	.35	.50	.50	.60	1.00	1.65	2.40	3.50
	(*For use on copper branch of Tee or Elbow*) Plug for Fitting	216	.25	.35	.35	.45	.75	1.30	1.90	2.80
	Sleeve-Nuts	200	.35	.50	.50	.60	1.00	1.65	2.40	3.50

Standard Boxing:

All fittings from 3/8" to 3/4" inclusive are individually boxed with five individual boxes to the standard carton. Sizes from 1" to 2" inclusive, are all boxed individually.

Extras:

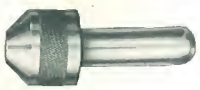
A charge of 25% will be made on all orders for 3/8" to 3/4" fittings calling for less than the standard carton of five fittings.

In Ordering—Remember

1. Don't over-order on elbows.
2. Remember you'll need flanging tools.
3. Carry an adequate supply of adapters.
4. It's more economical to use reducing adapters in place of reducing tees.
5. In using adapters specify whether male or female connection.

Chase Compression Fittings

List Prices

Fitting	Description	Catalog No.	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"
	Flanging Tools	1014	3.00	3.10	3.50	3.75	4.35	11.25	17.50	20.00
	Copper Pipe Straps	1019	32.95 M	38.00 M	45.70 M	50.70 M	56.60 M	91.70 M	139.40 M	145.70 M
	*(Copper to Male I. P. S.)* Range Boiler Fitting	220				1.45	2.35			
	*(Copper to Male I. P. S.)* Range Boiler Fitting	221				1.55	2.75			
	*(Copper to Copper)* Stop and Waste *(no stuffing box)*	1015		2.25	2.70	3.45	5.75			
	Stop and Waste *(with stuffing box)*	1016		2.50	2.85	3.75	6.25			
	*(Copper to Female I. P. S.)* Stop and Waste *(no stuffing box)*	1017		2.00	2.25*	2.85	4.50			
	Stop and Waste *(with stuffing box)*	1018		2.15	2.45*	3.15	5.00			

REVISED SEE NEW PRICE LIST

*5/8" size will be furnished to connect 5/8" Copper Tubing to 3/4" I. P. S.

Price:

Discounts to recognized jobbers will be quoted on request.

Terms:

2% discount for cash within 10 days, or net 30 days are our terms on Chase Compression Fittings.

Freight Allowance:

On shipments of 200 pounds or more of Chase Compression Fittings full freight allowance will be allowed East of the Mississippi and 75c. freight allowance on shipments of 200 pounds or more West of the Mississippi.

Returns:

No fittings are to be returned without our written permission.

Copper Water Tubing

(For use with Chase Compression Fittings)

Chase copper water tubing is stocked in straight lengths, but long length coils give the greatest economy.

In installing the tubing in a building the plumber's cost will be lowest by using the longest length coil that he can buy, and by cutting off the amount that he needs as he goes along. In this way he will have no scrap ends that short lengths would give him.

For underground water service lines we carry 40 ft. and 45 ft. coils in our mill stock, and we can also make various length coils and tubing of different tempers on special order.

For house installation work, however, the greatest economy will be in using 60 ft. coils whenever possible. The sizes of our stock lengths, as carried in all Chase warehouses, are given below:

Warehouse Stocks

3/8" to 3/4" inclusive..60 ft. coils
(also 45 ft. coils and 20 ft. straight lengths)

1" to 2" inclusive..20 ft. straight lengths only

NOMINAL SIZE INCHES	OUTSIDE DIAMETER INCHES	WALL THICKNESS INCHES	POUNDS PER LINEAL FOOT	1 TO 30 FT. LENGTHS Price per Foot	30 TO 45 FT. LENGTHS Price per Foot	OVER 45 FT. LENGTHS Price per Foot
3/8	.500	.049	.269	12c.	12 1/4c.	12 1/2c.
1/2	.625	.049	.343	15 1/2c.	15 3/4c.	16c.
5/8	.750	.049	.415	19 1/2c.	19 3/4c.	20c.
3/4	.875	.065	.640	27c.	27 1/2c.	28c.
1	1.125	.065	.838	35c.	35 1/2c.	36c.
1 1/4	1.375	.065	1.04	44c.		
1 1/2	1.625	.072	1.36	58c.	Not Longer Than Thirty Feet	
2	2.125	.083	2.06	84c.		

SUPERSEDED SEE NEW PRICE LIST

In Ordering, Remember—

Fittings—Copper to Rigid Pipe

Fittings adapted to change from rigid pipe to copper or vice versa, are shown on page 38, and it is extremely important to specify whether male or female connections are to be made with rigid pipe, as well as to specify the run on which rigid pipe will be used.

Example:

To order a tee connecting a ¾″ copper tube with a ½″ male I. P. S. take off.

Order { Chase TEE #213
¾″ copper x ¾″ copper x ½″ male I. P. S.

Reducing Fittings

All reducing fittings take the price of the largest size run. For example: a ¾″ x ½″ elbow will be priced on the basis of a ¾″ elbow. On account of the lesser cost, it is, therefore, economy to use a reducing adapter rather than a reducing fitting.

Flanging Tools

Do not overlook ordering a Flanging Tool for each size tubing used. Flanging Tools are made in ⅜, ½, ⅝, ¾, 1, 1¼, 1½ and 2″ sizes.

Adapters

If you plan to use threaded I. P. S. compression stops and wastes or other threaded rigid pipe fittings, do not overlook the necessity of ordering male or female adapters for converting such fittings for use with Copper Water Tubing. Do not under-order on adapters as they are used for connecting boilers, fixture fittings, etc., and should be carried in an adequate supply in the sizes up to 1″ by every plumber.

Elbows

Do not over-order on elbows. Remember that the tubing can be easily bent and it is easier and less expensive to make bends in the line than to use an excessive number of elbows.

Exchanges

Be sure in returning any fittings for replacement or exchange to include the compression sleeve-nuts.

Packed Fittings

All Chase Fittings in sizes up to ¾″ are packed in individual boxes packaged five to a carton. In all larger sizes, one to the individual box. All *reducing fittings* will be boxed one to the individual box.

Important

Use and demand packaged compression fittings. Compression fittings are a machined precision fitting and any damage to the thread or seat may make such fittings worthless. Packaging these fittings, as Chase does, protects them from damage during transit and storage.

Chase Bronze Screen Cloth

THE pesky flies and mosquitoes are barred out forever from the house that is protected with screened doors, windows and porches of Bronze or Copper. For Chase Bronze or Copper Screening cannot rust, never needs painting which thickens the wires and shuts out air and light, never provides an opportunity for dangerous insects to invade your home to disturb your sleep and contaminate your food. Safeguard your food and the health of your entire family with screens that are trustworthy and permanent, and that give sure and permanent protection against insects.

Chase Bronze Screening is stiff and strong and will not easily bulge or sag. It is uniform in mesh and with almost total freedom from splices, each wire is held firmly in place with a deep crimp.

Chase Bronze Screening is made from pure Chase Copper mixed with just the right amount of zinc to harden it and woven in one of the most modern screen cloth mills in the country which is devoted exclusively to manufacturing Chase non-rustable screening that will last and last.

Chase Bronze Screening is made in Bright (natural) and Antique (dark) finish and in 14, 16, and 18 mesh and in all even

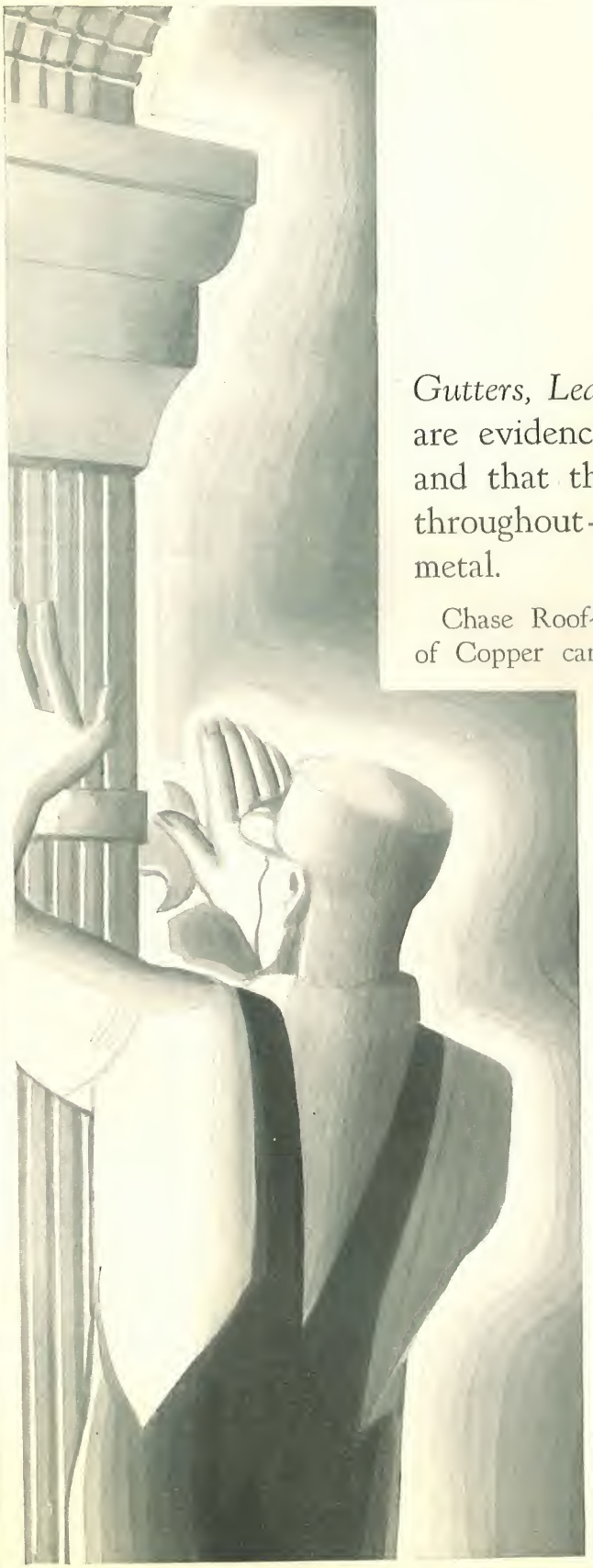
BUT
KEEP IT
PURE

CHASE

The mark that identifies good brass and copper products.

widths from 18 to 48 inches. It can also be supplied to special order in 54, 60, 66, and 72 inch widths. It is easily identified by the Chase name and the distinctive Chase-mark on the wrapper of every roll. Look for these—they are your guarantee of permanent protection and satisfactory quality—your assurance of a product that beautifies as well as protects.

Use Chase Copper Tacks, too—to make a good job complete.



CHASE

This mark identifies all Chase Copper roofing materials.

Gutters, Leaders and Downspouts of Copper are evidence of a sound, well built house and that the best materials have been used throughout—for Copper is a permanent metal.

Chase Roof-Gutters, Downspouts and Leader Heads of Copper cannot rust. They never leak and let the water through to stain your house, wash out your grass or bushes or undermine your foundations.

They give a lifetime of service because they are Copper. The first cost is the last cost and there are no expensive repairs later on.

Chase Copper Leader Heads, Gutters, Downspouts, Straps, soft roll copper for flashings, flat strip copper and all copper roofing accessories are made from full weight, honest gage, pure Chase Copper that will stand up in hard service. Each length is plainly stamped with the weight of the Copper from which it is made, (16 ounce Copper,) and the Chase name and Chase-mark that guarantee satisfactory quality.

Look for the distinctive Chase-mark, it is your guarantee that you are getting full weight, honest gage, pure Chase Copper.